

# Enbridge Inc's Comments on the Sunsetting of ENERGY STAR Certification for Furnace and Central Air Conditioners

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## Introduction

Enbridge Inc. (Enbridge) is a leading North American energy infrastructure company. We safely and reliably deliver the energy people need and want to fuel quality of life. Our core businesses include Liquids Pipelines, which transports approximately 30 percent of the crude oil produced in North America; Gas Transmission and Midstream, which transports approximately 20 percent of the natural gas consumed in the United States; Gas Distribution and Storage, which serves approximately 3.9 million retail customers in Ontario and Quebec; and Renewable Power Generation, which owns approximately 1,885 megawatts (net) in renewable power generation capacity in North America and Europe.

Enbridge believes that climate change requires serious solutions and that Enbridge can be part of those solutions. Along with our significant investments in traditional oil and gas energy systems, Enbridge is a leading North American developer in the low-carbon space, including initiatives in low-carbon hydrogen, carbon dioxide (CO<sub>2</sub>) capture and storage (CCS), and renewable natural gas (RNG) as well as technologies such as hybrid heating and gas heat pumps (GHP).

Enbridge recognizes that heat for buildings is the second largest source of greenhouse gas (GHG) emissions in Ontario,<sup>1</sup> third largest in Canada and fourth in the US.<sup>2</sup> By adopting high-efficiency technologies, including heat pumps, hybrid heating (pairing an electric Air Source Heat Pump (ASHP) with a gas furnace and smart controls), and low-carbon fuels for clean and reliable heat, while implementing energy conservation, we believe Canada can achieve net zero in the building sector by 2050. While the proposed ENERGY STAR certification changes directly impact the US, the US Environmental Protection Agency (EPA) should consider the breadth and depth of impacts that will extend internationally, especially in Canada, affecting consumer choice, affordability, and standards.

Enbridge appreciates the opportunity to provide commentary on the proposed changes to the ENERGY STAR certification process for residential furnaces and central air conditioners (CAC) as follows.

## Executive Summary

The ENERGY STAR symbol is synonymous with credible information to guide consumers towards energy efficient choices and plays a significant role in market development. As such, the ENERGY STAR Labelling Branch should not pre-suppose singular solutions and instead ensure expanded consumer choice to allow for regional and resource variations. It is important to recognize that the energy transition is unfolding internationally, and GHG emission reductions globally are equally important as domestic GHG emission reductions. For this reason, ENERGY STAR should consider the impact of the labelling system not only in the US but also abroad.

Below are Enbridge's recommendations:

- ENERGY STAR should consider supply chain, training, and education readiness before sunsetting certifications for furnaces and CACs.
- ENERGY STAR certification should allow alternative energy solutions, such as hybrid heating (including efficient furnaces with ASHP), thermally driven gas heat pumps, or continuation of highly efficient furnaces, to maintain optionality for achieving net-zero cost-effectively.
- Electrification of assets does not necessarily result in GHG emissions reductions due to the regional variation of sources of electricity production.
- GHG emissions reductions can be achieved in homes and businesses by blending low- and zero-carbon gaseous fuels, like hydrogen and RNG, into the existing reliable natural gas distribution system. Low- and zero-carbon gases support near- and longer-term GHG emissions reductions and play a crucial role in the pathway to net zero. A coordinated and integrated approach to energy system planning between the electric and gas sectors will identify the most reliable,

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<sup>1</sup> CER – Provincial and Territorial Energy Profiles – Ontario ([cer-rec.gc.ca](http://cer-rec.gc.ca))

<sup>2</sup> [Greenhouse gas emissions - Canada.ca](https://www.epa.gov/greenhouse-gas-emissions); and [Sources of Greenhouse Gas Emissions | US EPA](https://www.epa.gov/sources-greenhouse-gas-emissions)

resilient, sustainable, and cost-effective pathway to net-zero GHG emissions reduction. It will also ensure that energy systems are optimized and support GHG emissions reduction targets while meeting the increasing energy demands.

- Adopting a “wires and pipes approach” in which energy systems work together and promoting innovation in the electric and gas sectors provide direct benefits of enhanced reliability, assured resiliency, and lower costs now and into the future.

## Comments on the Proposed Certification Changes

### Impacts of ENERGY STAR Labelling on Consumer Choice

Enbridge acknowledges that energy transition requires that energy systems change to achieve GHG emissions reductions. This provides an unprecedented opportunity for the energy sector provincially, nationally, and internationally to explore innovative solutions. With the goal of GHG emission reductions from buildings, all energy transition opportunities should be explored and leveraged, encouraging affordability, reliability, resiliency, and consumer choice. The ENERGY STAR symbol is internationally recognized as a mark of high efficiency and is widely trusted by consumers looking to reduce GHG emissions and improve their home’s energy efficiency. Therefore, the proposed changes could have a significant market impact that must be considered.

A hybrid heating system, which commonly uses an ASHP and a natural gas furnace to provide heating, is energy-efficient and should be considered a key option for consumer choice and ensuring home heating system reliability. The proposed changes suggest sunsetting the ENERGY STAR labeling for gas furnaces while also encouraging the use of dual fuel systems that typically use a gas furnace, which appears contradictory. The proposed sunsetting of certification implies that this option would not be as available to consumers or, at worst, could lead to increased installation of lower-efficiency furnaces and negatively impact the goal of reducing GHG emissions.

The ENERGY STAR letter focuses on phasing out gas furnaces and central air conditioners, specifically with electric heat pumps. However, recent and rapid development in thermally driven heat pumps for residential and commercial buildings provides consumers with another option to reduce GHG emissions immediately by 20-50% compared to a traditional furnace or boiler. The benefit of such equipment extends beyond increased efficiency as they can also run on low-emission fuels such as renewable natural gas (RNG), hydrogen, or hydrogen blends to further reduce GHG emissions. Equipment Certification should not pre-suppose a singular solution but instead guide and inform consumer choice.

Finally, as ENERGY STAR labelling guides consumers in various regions and climates, certification of a variety of efficient equipment allows those in the Northern and Southern climates to choose the best single-use equipment while considering their utility availability as opposed to buying a product or service they do not need. Moreover, many homes in extreme cold climates do not have a current electrical power source sufficient for an ASHP, which means extensive and costly electrical upgrades would be required if ASHP was the singular suggested choice.

### Impacts of ENERGY STAR Labelling on Market Development

Considering the high incremental cost of ASHPs compared to a furnace and central air conditioners, and performance challenges in cold climates, a smooth transition from traditional heating systems to heat pumps will take time to guarantee that energy-efficient heating solutions are available for all climates. As part of this transition, many steps must be taken before commonly used and trusted equipment certifications change. For example, training contractors to appropriately identify, sell, and install these solutions into homes; and supporting the uptake of the technology into the market by providing incentives to customers to offset the increased cost of the solution compared with current standard alternatives. Adopting technologies can only happen when supply chains and contractors are ready, and the market has yet to reach that point. Enbridge urges the ENERGY STAR Labelling Branch to consider how changes to ENERGY STAR certifications will coincide with awareness, training, and cost offsets to ensure equal access to efficient technologies for all consumers.

### Impacts of ENERGY STAR Labelling on Emissions Reductions

The energy transition is unfolding internationally, and GHG emissions reductions globally are equally as important as domestic GHG emission reductions. For this reason, ENERGY STAR should consider the impact of the labelling system not only in the US but also abroad. Enbridge Gas, Enbridge’s natural gas utility in Ontario, Canada, acknowledges that a shift away from

heating with fossil fuels is required to achieve a net zero target. However, decarbonization should not be synonymous with electrification and building decarbonization does not require that gas heating equipment be restricted. Enbridge Gas's distribution system has been built to provide reliable and resilient energy at a large scale. When low-carbon fuels are blended into this system, it will play an important role in reaching net zero emissions for building heating.

Hybrid heating affordably reduces GHG emissions, ensures consumer choice, and provides energy system reliability and resilience. The letter asserts that *“heat pumps are as much as four times more efficient than even the most efficient condensing gas furnaces.”* While ASHPs operate efficiently in warm climates to provide cooling and heating, the efficiency of ASHPs significantly degrades at low outdoor air temperatures, necessitating backup heating systems. Long defrosting cycles in wet, cold climates not only deteriorate the ASHP efficiency but also reduce the life span of heat pumps and lower indoor thermal comfort levels. Enbridge commissioned Guidehouse Inc (Guidehouse) to complete a study of cold climate ASHPs within four Ontario climates. The study is included with this commentary but shows that, while cold climate heat pumps are effective in various climates, their performance is best in temperate climates.<sup>3</sup> For these reasons, variety in certified equipment is important for regional variability impacting equipment function.

The letter also mentioned, *“Notably, while indoor NOx pollution is associated with gas appliances, electric appliances are not responsible for any direct emissions and garner significant emissions reductions even when source or upstream emissions from electricity generation are factored in.”* The impacts of source or upstream emissions (i.e., Scope 2 emissions for the home/building) can significantly vary regionally depending on the carbon intensity of the local electricity grid. Given the vast impacts of the ENERGY STAR rating and the significant variability of electricity supply mixes, such a general claim is difficult to validate. For example, GHG emissions calculated from electrical sources during peak energy demand periods are greater than GHG emissions calculated if only average emission factors result in marginal emissions higher than the average for the electricity grid in Ontario. This means that GHG emissions may be underestimated if peak electric demand is supported by fossil fuel-fired generation. As the electrification of transportation and building heat rapidly increases, coincidentally increasing electrical peaks and limiting emission-free electricity supply ability to keep pace, such calculations are increasingly important.

Enbridge suggests that all energy transition opportunities be explored and that there should not be a presumption that electrification is the only, or best, way to achieve GHG emissions reductions. International certification that allows consumers the flexibility to choose the appropriate energy sources, types and technologies for their jurisdiction based on regional differences, including existing energy infrastructure and supply, will ensure that net zero is achieved more affordably, with greater reliability, resiliency, and enables consumer choice.

## Summary

As the energy transition continues to unfold, Enbridge suggests considering a diversified pathway that includes both electric and low- and zero-carbon gas (i.e., RNG and low-carbon hydrogen) solutions. A diversified pathway to net-zero emission utilizes the electricity and gas systems at the lowest cost for consumers while ensuring expanded consumer choice, reliability, resilience, and affordability of energy systems. The energy transition provides an unprecedented opportunity for the energy sector provincially, nationally, and internationally to explore innovative solutions that address GHG emission reductions to achieve net zero goals.

Enbridge appreciates the opportunity to provide feedback and recommendations and would be pleased to work with ENERGY STAR on future integrated energy rating systems. If you have any questions or require additional information, please do not hesitate to contact Alicia Lenny, [alicia.lenny@enbridge.com](mailto:alicia.lenny@enbridge.com), Specialist Low Carbon Technologies.

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<sup>3</sup> <https://www.rds.oeb.ca/CMWebDrawer/Record/792239/File/document>, pages 10-31